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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/718,144 | 11/20/2003 | Laurent De Volder | 018789002-01 | 9004 |
| 1131 | 7590 | 05/27/2005 | EXAMINER | |
| MICHAEL BEST & FRIEDRICH LLC 401 NORTH MICHIGAN AVENUE SUITE 1900 CHICAGO, IL 60611-4212 | | | HINZE, LEO T | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2854 | |
| DATE MAILED: 05/27/2005 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

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|---|-----------------|--------------------|
| <i>Supplemental Office Action Summary</i> | Application No. | Applicant(s) |
| | 10/718,144 | VOLDER, LAURENT DE |
| | Examiner | Art Unit |
| | Leo T. Hinze | 2854 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 16 May 2005.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-12 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-12 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 13 September 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: '28' in Fig. 8.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "29" has been used to designate both a pad in Figs. 9 and 10 and a vacuum chamber in Fig. 8. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action.

A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 6-11 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim may not serve as a basis for any other multiple dependent claim, either directly or indirectly. See MPEP § 608.01(n). Even though the claims do not need to be further

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treated on the merits, to expedite prosecution, the examiner has examined the claims as if they had the same dependency as before the latest amendment.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by Bachmann, US 5,456,170 (Bachmann).

Bachmann teaches a process for printing objects, in particular medical tablets, comprising a pad printing head (39, Fig. 4) that starts from the starting position, wherefrom the pad printing head is moved downwardly to take over a quantity of printing liquid, in particular ink, from a plate (51, Fig. 4) in an ink take-over position, after which the pad printing head loaded with ink is moved upwardly again into position, after which the pad printing head with the image take-over is moved forwardly until above the object to be printed in segment, wherein an ink tank (55, Fig. 4) is also moved simultaneously in substantially the same horizontal direction forwardly so as to ink the image in the plate again, after which the pad printing head is moved downwardly to the object to be printed and deposits thereon the image taken over, after which the pad printing

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head is moved in substantially the same horizontal direction to its initial position just like said ink tank (Fig. 4, col. 3, lines 38-43).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bachmann in view of Robbins, US 2,500,871 (Robbins).

A. Regarding claim 1:

Bachmann teaches an ink ball printing machine, including printing apparatus for printing relatively small, light objects including medical tablets, having a certain brittleness and/or porosity comprising a movable print head (39, Fig. 4), a printing liquid tank (55, Fig. 4), characterized in that the print head is arranged in a linear pad printing system with a closed ink system wherein said printing liquid tank is arranged to slide over a cliché (51, Fig. 4) in substantially only a horizontal motion (Fig. 4, col. 3, lines 38-43). Bachmann is silent as to the manner in which articles to be printed (3, Fig. 4) arrive and leave the printing station.

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Bachmann does not teach a conveyor unit supplying and discharging the objects to be printed to, respectively from the print head, with said conveyor unit including a rotating table having predetermined locations for receiving temporarily the objects during the printing stage.

Robbins teaches a conveyor unit (Figs. 1, 2, and 3) supplying and discharging the objects to be printed to, respectively from the print head, with said conveyor unit including a rotating table (1, Fig. 1) having predetermined locations (4, Fig. 1) for receiving temporarily the objects during the printing stage. Robbins also teaches that a rotary conveyor for supplying objects to and discharging objects from a printing station is advantageous in that it greatly increases the speed of operation and the output (col. 1, lines 29-38)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Bachmann to include a conveyor system with a rotary plate with holes for holding an object to be printed and a stationary plate just below the rotating plate, such that the objects rested on the stationary plate, because Robbins teaches that such a conveying system is advantageous for greatly increasing the speed of operation and the output of a printing machine.

B. Regarding claim 2, the combination of Bachmann and Robbins teaches all that is claimed as discussed in the rejection of claim 1 above. Robbins additionally teaches wherein said rotating table is comprised of a table plate (14, 15, Fig. 3) having a high smoothness whereupon a set of segments (1, Fig. 1) is provided which are able to float at a small height over said table plate, wherein said table plate and segments are plane.

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C. Regarding claim 3, the combination of Bachman and Robbins teaches all that is claimed as discussed in the rejection of claim 2 above. Robbins additionally teaches wherein said segments are provided with holes (4, Figs. 1, 2) which are realized in the segments wherein said objects to be printed fit so that their bottom side can get into contact with said table plate (Fig. 5).

8. Claims 4, 5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bachmann in view of Robbins as applied to claim 2 above, and further in view of West, US 3,225,889 (West).

A. Regarding claim 4:

The combination of Bachmann and Robbins teaches all that is claimed as discussed in the rejection of claim 2 above, except wherein said segments are removable and mutually changeable, thereby having holes with different size and shape, which are adapted to the objects to be printed, wherein said holes are arranged according to a predetermined pattern in each segment.

West teaches a machine with a rotary turret-type conveyor, including: wherein segments have holes with different size and shape (Figs. 5 and 8), which are adapted to the objects to be manipulated, wherein said holes are arranged according to a predetermined pattern in each segment; wedge sections (149, Fig. 5) are readily removed and replaced with substitute sections (col. 4, lines 69-72); that such a machine can be readily adapted to handle differently sized materials (col. 1, lines 24-28 and lines 46-50).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Bachmann to use segments with holes adapted to the objects to be printed, said holes arranged according to a predetermined pattern, wherein the segments are removable and mutually changeable, because West teaches that using mutually exchangeable, different segments with holes of different sizes is advantageous in that such a machine can be readily adapted to handle differently sized materials.

B. Regarding claim 5:

The combination of Bachmann and Robbins teaches all that is claimed as discussed in the rejection of claim 2 above, except wherein said segments are mutually adjacent two by two with their mutually contracting ribs extending radially.

West teaches a machine with a rotary conveyor, including: wherein said segments are comprised in a disk, wherein the segments are mutually adjacent two by two and/or radially separated from each other; wedge sections (149, Fig. 5) are readily removed and replaced with substitute sections (col. 4, lines 69-72); that such a machine can be readily adapted to handle differently sized materials (col. 1, lines 24-28 and lines 46-50).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Bachmann to use segments with holes adapted to the objects to be printed, said holes arranged according to a predetermined pattern, wherein the segments are removable and mutually changeable, because West teaches that using mutually exchangeable, different segments with holes of different sizes is advantageous in that such a machine can be readily adapted to handle differently sized materials.

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C. Regarding claim 12, the combination of Bachmann, Robbins and West teaches all that is claimed as discussed in the rejection of claim 4 above. West also teaches wherein the predetermined patterns are arranged as circular areas (see circular pattern of holes 149 in Fig. 5).

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bachmann in view of Robbins as applied to claim 2 above, and further in view of Ackley, US 4,672,892 (Ackely).

The combination of Bachmann and Robbins teaches all that is claimed as discussed in the rejection of claims 1 and 2 above, except a supply unit provided wherein the objects to be printed are stocked for being supplied on said rotating table, wherein a set of brushes are arranged in a brush casing which are provided at the outlet aperture of the supply unit and streaming downwardly therefrom, so that they can work as object separators over the segments for a substantially complete occupation of the holes therefrom.

Ackley teaches an apparatus for conveying and marking pellet-shaped objects, including a supply unit (11, Fig. 2) provided wherein the objects (10, col. 4, line 51) to be printed are stocked for being supplied on said rotating table, wherein a set of brushes (18, Fig. 2) are arranged in a brush casing which are provided at the outlet aperture of the supply unit and streaming downwardly therefrom, so that they can work as object separators over the segments for a substantially complete occupation of the holes therefrom (col. 4, lines 66-68). Ackley also states that such an apparatus is advantageous in improving the efficiency in the handling of the articles being imprinted (col. 2, lines 60-61), by ensuring that each aperture for holding an article is filled as it leaves the feed hopper (col. 1, line 67 through col. 2, line 6).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Bachmann to use a hopper and a brush to feed the articles to the conveyor, because Ackley teaches that such an apparatus is advantageous in improving the efficiency in the handling of the articles being imprinted, by ensuring that each aperture for holding an article is filled as it leaves the feed hopper.

10. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bachmann in view of Robbins as applied to claim 2 above, and further in view of Maerkedahl, US 5,343,997 (Maerkedahl).

The combination of Bachmann and Robbins teaches all that is claimed as discussed in the rejection of claims 1 and 2 above, except a blow unit arranged streaming downwardly from the brush casing for blowing away waste objects to a receiving unit.

Maerkedahl teaches a conveying unit for feeding articles, including an air nozzle (60, Fig. 4) for blowing away incorrectly seated articles (col. 4, lines 47-52). Maerkedahl teaches that an air nozzle is advantageous in helping ensure sufficient but not a surplus of quantities of articles are present when feeding a surplus of articles to the conveying system (col. 2, lines 4-9).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Bachmann to use a blow unit to blow away waste objects, because Maerkedahl teaches that a blow unit is advantageous in helping ensure sufficient but not a surplus of quantities of articles are present when feeding a surplus of articles to the conveying system.

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11. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bachmann in view of Robbins as applied to claim 1 above, and further in view of Rohwetter et al., US 5,456,169 (Rohwetter).

The combination of Bachmann and Robbins teaches all that is claimed as discussed in the rejection of claim 1 above, except a drying station provided streaming downwardly from the moveable print head for drying the printed objects.

Rohwetter teaches a printing machine (col. 9, lines 37-38) with a rotary conveyor (12, Fig. 1), including a drying station (XXIII, Fig. 1), where the ink applied to the article is dried.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Bachmann to include a drying station, because Rohwetter teaches that drying stations are well-known in the art, and one having ordinary skill in the art would recognize the advantages of drying the ink on an article, such as preventing the ink from smearing or being applied to another article.

12. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bachmann in view of Robbins as applied to claims 1 and 2 above, and further in view of Charlier et al., US 6,176,185 B1 (Charlier).

A. Regarding claim 9:

The combination of Bachmann and Robbins teaches all that is claimed as discussed in the rejection of claim 2 above, except a vacuum chamber provided under the rotating table at the printing head for holding the objects during the printing operation by means of small holes in the table plate provided therefore.

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Charlier teaches a method of printing on small articles, including using vacuum to hold the article and prevent it from sticking to the printing pad when the pad is lifted (col. 7, lines 5-12).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Bachmann to use vacuum from an aperture located under the article for holding the article, because Charlier teaches that vacuum is advantageous for preventing an object from sticking to the printing pad when the pad is lifted.

B. Regarding claim 10, the combination of Bachmann and Robbins teaches all that is claimed as discussed in the rejection of claim 9 above. Charlier additionally teaches a method of printing on small articles, including using vacuum to hold the article and prevent it from sticking to the printing pad when the pad is lifted (col. 7, lines 5-12).

Response to Arguments

13. Applicant's arguments filed 13 September 2004 have been fully considered but they are not persuasive.

14. In response to applicant's argument that Bachmann teaches an ink tank that must be moved vertically, the examiner can find no such assertion in Bachmann. Bachmann does have a cylinder-piston unit 57 (Fig. 4), but the unit is not used to raise the ink cup 55 as asserted by the applicant. The ink cup is of the "well-known inverted" type, and if the cylinder was used to raise the ink cup, all of the ink would run out of the bottom of the cup, effectively making printing impossible. The cylinder-piston unit 57 is most likely used to provide positive pressure of the ink

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cup against the cliché 51 (Fig. 4) to create a good seal that prevents ink from running out of the bottom of the ink cup.

15. In response to applicant's argument that the European Patent Office found claim 11 novel in view of Bachman, applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

16. In response to applicant's argument that there is no suggestion to combine Bachmann and Robbins, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Bachmann is silent as to the manner in which articles to be printed are delivered to and transported from the printing area. Robbins teaches a turret-style rotary conveyor for delivering small objects to a printing station. The rotation of the printing wheel is not necessary for Robbins' conveyor to work properly, as asserted by the applicant (C, page 12). The conveyor of Robbins works independently of the printing wheel. One having ordinary skill in the art would recognize that the article conveying system taught by Robbins, when added to the Bachmann printing apparatus, would provide a means and method of quickly transporting articles to and from the printing station.

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17. In response to applicant's argument that the applied art is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case:

- A. Regarding claims 4 and 5 and the combination of Bachmann and Robbins with West, Bachmann and Robbins are concerned with using a turret-style conveyor to deliver articles to a processing station, and West is concerned with using a turret-style conveyor to deliver articles to a processing station.
- B. Regarding claim 7 and the combination of Bachmann and Robbins with Maerkedahl, Bachmann and Robbins are concerned with sorting small objects onto a conveyor means, and Maerkedahl is concerned with sorting small objects onto a conveyor means.
- C. Regarding claim 8 and the combination of Bachmann and Robbins with Rohwetter, Bachmann and Robbins are concerned with printing with an ink that must be dried to set, and Rohwetter is concerned with printing with an ink that must be dried to set.
- D. Regarding claims 9 and 10 and the combination of Bachmann and Robbins with Charlier, the combination of Bachmann and Robbins is concerned with the pad printing of small objects and a means and method of securing the small objects at the printing station, and Charlier is concerned with the pad printing of small objects and a means and method of securing the small objects at the printing station.

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Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

19. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leo T. Hinze whose telephone number is (571) 272-2167. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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25 May 2005



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